

stantially fixed, and also the number of twists at the twisted portion can be fixed, thereby making it possible to prevent the occurrence of untwisting. Further, since the conventional fixed guide can be eliminated, it is possible to reduce the resistance applied to the casing containing the material and released from the material-discharging end, and it is hence possible to favorably prevent the breakage of the casing. Furthermore, in accordance with the present invention, it is possible to provide an apparatus for manufacturing a chain of linked sausages or the like which is capable of rendering the product configuration and resiliency (hardness) constant and uniform and of further reducing the breakage of the casings since the sliding resistance of the casing fitted over the nozzle can be set to a fixed level. Moreover, the apparatus of the present invention can be applied to both casings of natural intestines such as sheep intestines and hog intestines and artificial casings, and also can be applied to both types in which the nozzle is rotated continuously and in which the nozzle is rotated intermittently. In addition, it is possible to attain the automation of the stuffing operation and labor saving, and even if the casing becomes broken, the material-filling operation can be continued without stopping the operation of the apparatus. Hence, the looping operation and the smoking-stick suspension operation can be carried out continuously, following the material-filling operation.

Claims

corresponds to Claim 1 of reference

1. An apparatus for manufacturing a chain of linked sausages or the like, comprising:
 - a nozzle having a material-discharging end;
 - material-supplying means for intermittently supplying a substantially fixed amount of a material into said nozzle;
 - a braking member for braking the release of a casing fitted over said nozzle from said material-discharging end;
 - rotation-imparting means for rotating said nozzle; and
 - determining means for determining the position of a twist occurring in the casing which contains the material discharged from said material-discharging end and which is released from said material-discharging end.
2. An apparatus for manufacturing a chain of linked sausages or the like according to Claim 1, wherein said determining means determines the position of the twist occurring in the casing in synchronism with the intermittent supply of the material by said material-supplying means.

3. An apparatus for manufacturing a chain of linked sausages or the like according to claim 1 or 2, wherein said determining means includes detecting means for detecting the intermittent supply of the material by said material-supplying means and clamping means for clamping the casing released from said material-discharging end on the basis of a detection signal from said detecting means.
4. An apparatus for manufacturing a chain of linked sausages or the like according to claim 1, 2 or 3, wherein said determining means includes detecting means for detecting the intermittent supply of the material by said material-supplying means and bending means for bending the casing released from said material-discharging end on the basis of a detection signal from said detecting means.
5. An apparatus for manufacturing a chain of linked sausages or the like according to any one of claims 1 to 4, wherein said determining means includes a supporting member for supporting from a lower position the casing released from said material-discharging end and suspended by its own weight, and for facilitating a bend in the casing at a supporting position of said supporting member and preventing the rotation of the casing at a supporting position of said supporting member.
6. An apparatus for manufacturing a chain of linked sausages or the like, comprising:
 - a nozzle having a material-discharging end;
 - material-supplying means for intermittently supplying a substantially fixed amount of a material into said nozzle;
 - a braking member for braking the release of a casing fitted over said nozzle from said material-discharging end;
 - rotation-imparting means for rotating said nozzle; and
 - controlled-pusher means for pushing a trailing end of the casing fitted over said nozzle toward said material-discharging end in a controlled state.
7. An apparatus for manufacturing a chain of linked sausages or the like according to Claim 6, wherein said controlled-pusher means includes storage means for storing a pushing program in advance, and the trailing end of the casing is pushed in accordance with said pushing program.
8. An apparatus for manufacturing a chain of linked sausages or the like according to Claim 6, where-

In said controlled-pusher means includes an electric motor for generating a pushing force.

9. An apparatus for manufacturing a chain of linked sausages or the like according to Claim 8, wherein said controlled-pusher means further includes storage means for storing a pushing program in advance, and said electric motor is operated in accordance with said pressing program stored in said storage means. 5
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10. An apparatus for manufacturing a chain of linked sausages or the like according to Claim 8 or 9, wherein said controlled-pusher means further includes detecting means for detecting a form of the casing fitted over said nozzle, and said electric motor is operated in accordance with a detection signal from said detecting means. 15
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11. An apparatus according to any one of the claims 1 to 6 further comprising the controlled pusher means of any one of claims 7 to 10. 20

12. An apparatus for manufacturing a chain of linked sausages or the like according to any one of the preceding claims further comprising removing means for removing from a vicinity of said material-discharging end the casing containing the material and released from said material-discharging end. 25
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13. An apparatus for manufacturing a chain of linked sausages or the like, according to any one of the preceding claims further comprising: 35
 - transporting means for receiving at a lower position spaced apart a predetermined distance from said material-discharging end the casing containing the material and released and suspended from said material-discharging end, and 40
 - for consecutively transporting the material-containing casing received. 45

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